

In the Specification

Please amend the Abstract as follows:

A machine for loading a load carrier (20) such as a pallet with packing units (cardboard boxes, collis etc.), which form a load stack (21) on the load carrier, is presented. comprises The machine includes handling and support ~~means~~ mechanism (52-57), ~~by means of which that allows a~~ packing unit (15) to be loaded. The handling and support mechanism is supported supports the load from below throughout the operation of loading from a feed device (51) onto the load stack. By virtue of the handling and support ~~means~~ mechanism, the packing unit may be deposited at any selectable spatial position on the load stack. ~~According to the invention it~~ It is therefore possible to form an optimized load stack on the load carrier, ~~wherein in which~~ the packing units are always supported from below, with the result that the loading is not dependent upon the material quality of the packaging of the packing unit.

Please amend the Title as follows:

~~Load carrier Loading Apparatus~~ An Apparatus for Depositing a Packing Unit at a Desired Position on a Load Carrier

Please amend page 7, lines 23-25 as follows:

~~Fig. 9~~ Figs. 9a1, 9a2, 9b1, 9b2, 9c1, and 9c2 diagrammatically illustrate ~~illustrates~~ the mode of operation of an embodiment of a tray-vibrating device according to the invention.

Please amend page 7, lines 31-33 as follows:

~~Fig. 11 is a~~ Figs. 11-1 through 11-10 schematically illustrate the ~~sequence diagram~~ illustrating of the loading operation according to an embodiment of the invention.

Please amend page 8, lines 1-4 as follows:

~~Fig. 12 is~~ Figs. 12a through 12e are a sequence of diagrammatic side views of an embodiment of the loading apparatus according to the invention illustrating the mode of operation of the invention.

Please amend the paragraph starting at page 14, line 14 as follows:

The tray-vibrating device used to align an article or packing unit 15 on the tray 10 is now described with reference to Figs. 9a1, 9a2, 9b1, 9b2, 9c1, and 9c2 (herein collectively referred to as Fig. 9). The tray-vibrating device 70 comprises a tilting support 71 and a lifting piston 72, which supports a support plate 73 at the corner lying diagonally opposite the tilting support 71, and by virtue of a downward movement of the lifting piston effects a diagonal tilting of the support plate 73 and hence of a tray 10 resting thereon.

Please amend the paragraph starting at page 14, line 24 as follows:

The operation of aligning the packing unit 15 on the tray 10 is diagrammatically illustrated in Fig. 9 in the diagram sequence ~~a1) to e1)~~ 9a1, 9b1, and 9c1 in side view and in the diagram sequence ~~a2) to e2)~~ 9a2, 9b2, and 9c2 in plan view. In ~~Fig. 9a~~ Figs. 9a1 and 9a2, the tray 10 carrying the packing unit 15 passes from the conveying device onto the support plate 73 of the tray-vibrating device 70. In ~~Fig. 9b~~ Figs. 9b1 and 9b2, the lifting piston 72 is lowered with simultaneous horizontal vibrating motions (to overcome frictional forces) so that the packing unit 15 moves towards the lowered corner of the tray 10 (see arrow in Fig. 9b2), with the result that the packing unit 15 is aligned on the tray. The lifting piston is then raised again so that the support plate is situated in a horizontal position and the tray 10 with the aligned packing unit 15 may be conveyed further.

Please amend the paragraph starting at page 15, line 7 as follows:

Fig. 10 is a perspective view of an embodiment of the load-carrier loading apparatus 50 according to the invention. The mode of operation of this embodiment is further clarified by the sequence diagrams shown in Figs. 11 and 12.

Please amend the paragraph starting at page 16, line 23 as follows:

The loading operation is described once more in detail below with reference to the sequence diagrams in plan view of Figs. 11-1 through 11-10 (herein collectively referred to as Fig. 11). In Fig. 11-1 ~~diagram 1~~, the packing unit 15 situated on the tray 10 is acted upon by the lifting pins 54 and then conveyed by the rake 15 onto the loading plate 52. The packing unit 15 is then displaced by the displacement device 53 in x-direction to the loading position (Figs. 11-2 and 11-3 ~~diagrams~~

2 and 3). Once the correct x-position has been reached (Fig. 11-4 diagram 4), the packing unit is pushed by the scraper 57 onto the loading tongue 56 (Fig. 11-5 diagram 5) and then, while lying on the loading tongue 56, is pushed in z-direction to the intended position (Figs. 11-6 and 11-7 diagrams 6 and 7) and then pressed by a slight movement of the loading tongue in (in said case) negative x-direction against a packing unit already provided in the load plane (Fig. 11-7 diagram 7). The loading tongue is then retracted, while the scraper 57 initially remains in position (diagram 8), with the result that the packing unit 15 is deposited in its intended position. Finally, loading tongue and scraper are both retracted so that the next packing unit 15a may be positioned.

Please amend the paragraph starting at page 17, line 11 as follows:

As is evident from Fig. 11-6 diagram 6, as the first packing unit 15 is being loaded by the loading tongue onto the load stack, the next packing unit is already being pushed by the rake 55 onto the loading plate 52, then in Figs. 7, 8, and 9 diagrams 7, 8 and 9 displaced by the displacement device 9 in x-direction into the correct position and in Fig. 11-10 diagram 10 acted upon by the scraper 57.

Please amend the paragraph starting at page 17, line 24 as follows:

The sequence of Figs. 12a through 12e (herein collectively referred to as Fig. 12) shows the mode of operation of the loading apparatus according to the invention in side view. Here, mention should be made of the pallet-lifting device 61, which effects the positioning of a packing unit in the load stack in y-direction by lifting and/or lowering the load carrier. It is also clearly evident from Fig. 12 how in Figs. 12a), 12b), 12c) the packing unit 15 ("cardboard box") is conveyed by loading tongue 56 and scraper 57 to the correct depth position on the load stack. In the method step shown in Fig. 12d) the loading tongue 56 is already retracted and the packing unit is held in position only by the scraper 57, which in Fig. 12e) likewise retracts in order to be able to act upon the next packing unit.